

# JRB SERIES

Jonell JRB cartridges have a unique, proprietary two-stage filtration design to maximize particle retention and service life in viscous fluid filtration applications. An outer, spiral, pre-filter wrap, made from a blend of polyester and acrylic fibers, increases cartridge strength and eliminates residual debris associated with conventional or machined and grooved, resin bonded cartridges. JRB filter cartridges are available in eight differentiated removal ratings of 2µm, 5µm, 10µm, 25µm, 50µm, 75µm, 125µm and 150µm pore sizes to meet a wide range of performance requirements.



*JRB Series Filter Cartridges*

## BENEFITS

- Outer spiral wrap collects large particles and agglomerates, while inner layers control particle removal at rated size
- Outer wrap increases surface area and eliminates loose debris and contamination caused by machined products
- Extra-long acrylic fibers provide added strength, resist breakage and migration common with competitive “short fiber” cartridges
- Available with optional single- open-end seals (222 o-ring with flat cap)
- Phenolic resin impregnation strengthens cartridge for use with high viscosity fluid
- Withstands pressure surges up to 150 psid across cartridge (depending on fluid temperature)
- One-piece construction eliminates bypass concerns with multilength cartridges and eases change out
- Silicone-free construction ensures no contamination to adversely affect adhesion properties of coatings

## APPLICATIONS

Among the many applications where JRB resin bonded filter cartridges can be found are the following:

- Paints
- Plasticizers
- Printing Inks
- Waxes
- Adhesives
- Oilfield Fluids
- Resins
- Process Water
- Emulsions
- Petroleum Products
- Chemical Coatings Products
- Organic Solvents

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## SPECIFICATION

### Materials of Construction:

1st stage Pre-filter wrap: Polyester/Acrylic long staple fiber blend  
 2nd stage Final Filter wrap: Acrylic long staple fiber  
 Fibers impregnated with Phenolic Resin

### Type of Construction:

Coreless, one-piece, rigid resin bonded fibrous matrix

### Maximum Recommended Operating Conditions:

Flow Rate: 5 gpm per 10 in length (18.9 lpm per 254 mm length)  
 Temperature: 250°F (121°C)  
 Maximum Recommended Change Out P: 50 psid (3.5 bar)  
 Recommended Maximum Differential Pressure: *Cartridge Pressure Resistance:*  
 150 psid (10 bar) @ 70°F (21°C)  
 125 psid (8.6 bar) @ 100°F (38°C)  
 90 psid (6.2 bar) @ 150°F (65°C)  
 65 psid (4.5 bar) @ 180°F (82°C)  
 25 psid (1.7 bar) @ 250°F (121°C)

### Particle Removal Ratings:

2µm, 5µm, 10µm, 25µm, 50µm, 75µm, 125µm and 150µm

### Dimensions, in (mm):

Outside Diameter: 2-9/16 in (65)  
 Inside Diameter: 1-1/8 in (28.6)  
 Lengths: Nominal, 10, 20, 30 and 40 in lengths

### Environmental/Chemical Compatibility:

Classified as a nonhazardous material

- Incinerable (8000 BTU/lb)
- Crushable and shredable
- Certified silicone-free
- Suitable for weak acids and bases (pH 5-9)
- Unsuitable for oxidizing agents
- Not recommended for FDA applications

### End Adapters:

None on double open end style ABS (Acrylonitrile Butadiene Styrene) for most applications

## JRB FLOW / LENGTH FACTORS

Please see the following factors for calculations purposes:

Rating (µm)	Flow Factors	Length (in)	Length Factor
2	0.08	9	1.0
5	0.04	10	1.0
10	0.02	19	2.0
25	0.012	20	2.0
50	0.01	29	3.0
75	0.006	30	3.0
125	0.0013	39	4.0
150	0.0010	40	4.0

## FORMULAS

### Flow and Pressure Drop Formulas

$\text{Flow Rate (gpm)} = [\text{Clean } \Delta P \times \text{Length Factor}] / [\text{Viscosity} \times \text{Flow Factor}]$

$\text{Clean DP} = [\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}] / [\text{Length Factor}]$

1. Clean  $\Delta P$  is PSI differential at start.
2. Viscosity is centistokes. Use Conversion Tables for other units.
3. Flow Factor is  $\Delta P/\text{GPM}$  at 1 cks for 10 in (or single).
4. Length Factors convert flow or  $\Delta P$  from 10 in (single length) to required cartridge length.

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## ORDERING INFORMATION

JRB	□	A	—	□
Cartridge Code	Micron Rating (µm)	Standard OD	Length	
JRB = ResinBond Series	2 5 10 25 50 75 125 150	2 1/2	(code)	(in) (series)
			9.8	9-3/4 248
			10	10 254
			19.5	19-1/2 495
			20	20 508
			29.3	29-1/4 743
			30	30 762
			39	39 961
			39	39 991
			40	40 1016

*To answer more questions about your activated carbon application, always contact an approved JONELL representative, or JONELL direct.*

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